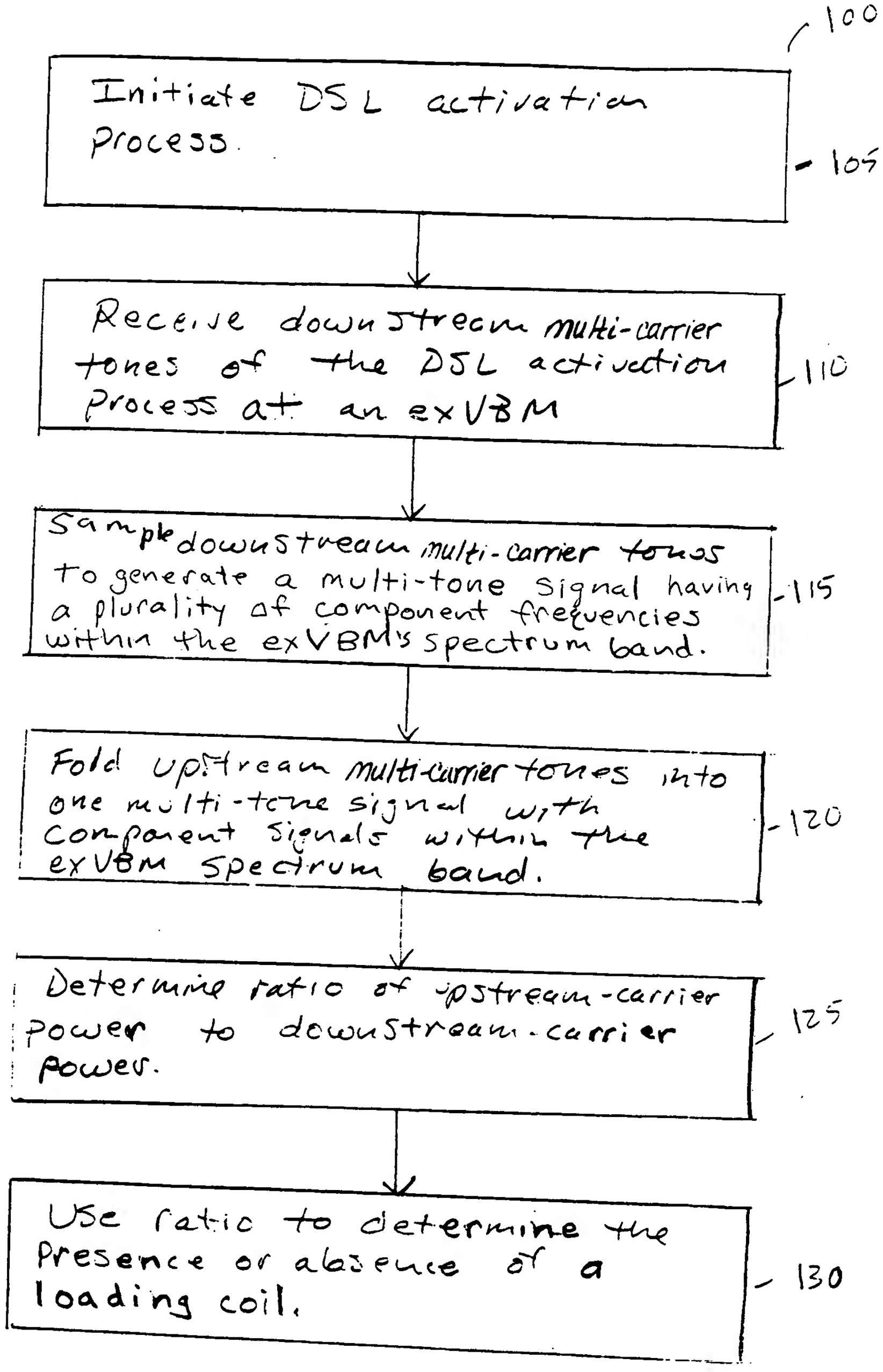
100
Initiate DSL activation process.
105
Receive downstream multi-carrier tones of the DSL activation process at an exVBM
110
Sample downstream multi-carrier tones to generate a multi-tone signal having a plurality of component frequencies within the exVBM's spectrum band.
115
Fold upstream multi-carrier tones into one multi-tone signal with component signals within the exVBM spectrum band.
120
Determine ratio of upstream-carrier power to downstream-carrier powers.
125
Use ratio to determine the presence or absence of a loading coil.
130

Fig. 1

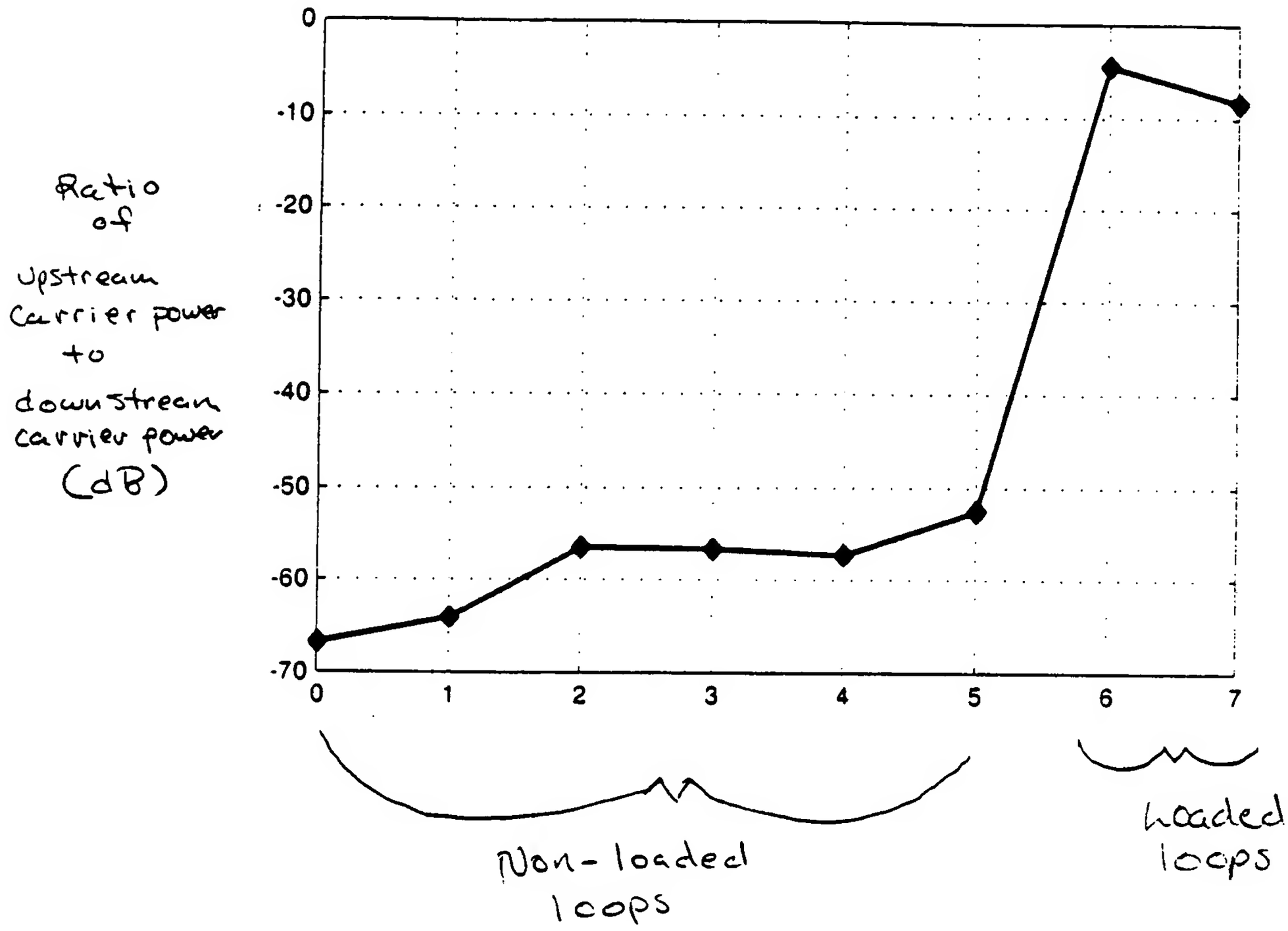
0
-10
-20
-30
-40
-50
-60
-70
0
1
2
3
4
5
6
7
Ratio of Upstream Carrier power to downstream carrier power (dB)
Non-loaded loops
loaded loops

Fig. 2

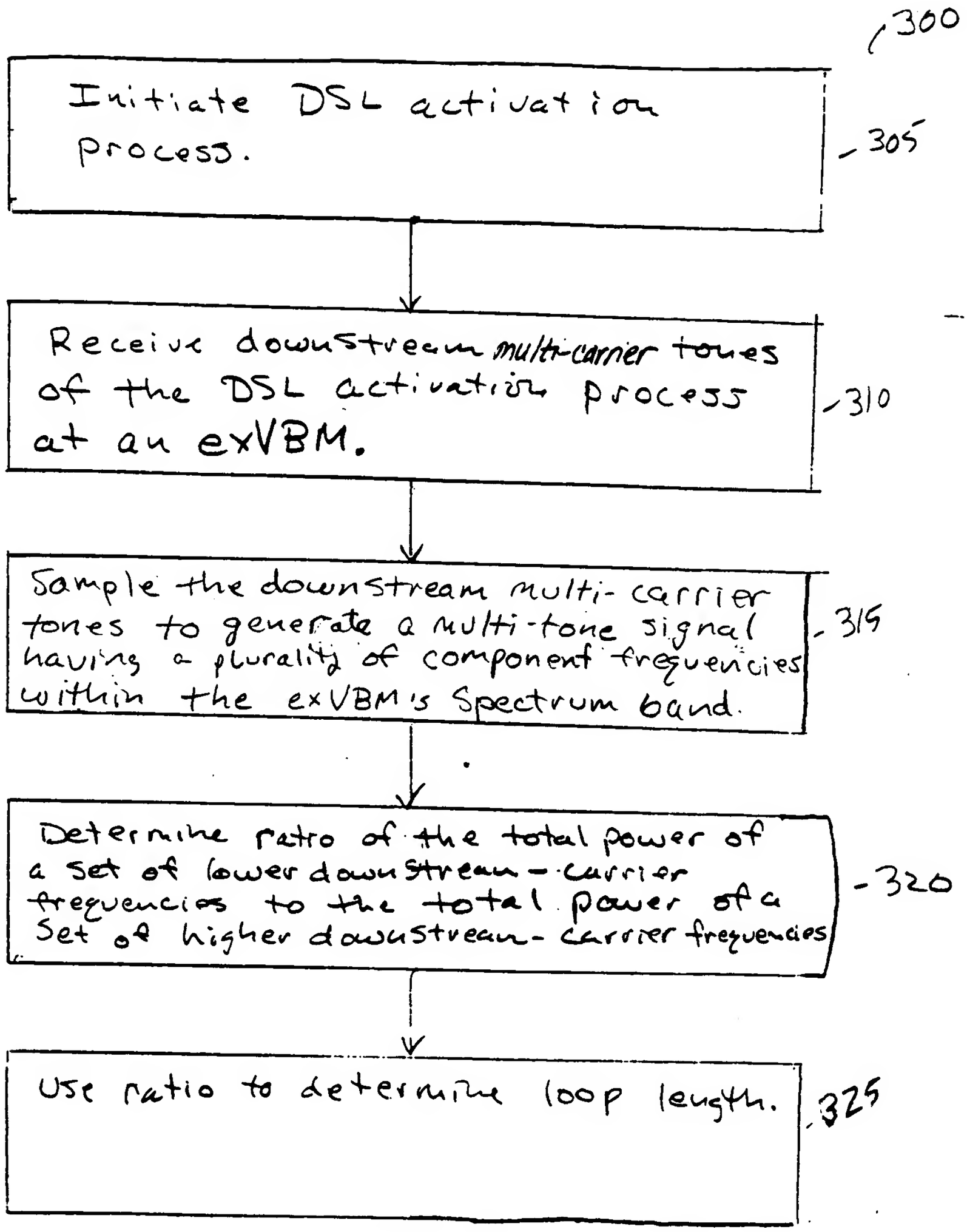
300
Initiate DSL activation process.
305
Receive downstream multi-carrier tones of the DSL activation process at an exVBM.
310
Sample the downstream multi-carrier tones to generate a multi-tone signal having a plurality of component frequencies within the exVBM's Spectrum band.
315
Determine ratio of the total power of a set of lower downstream-carrier frequencies to the total power of a set of higher downstream-carrier frequencies
320
Use ratio to determine loop length.
325

Fig. 3.

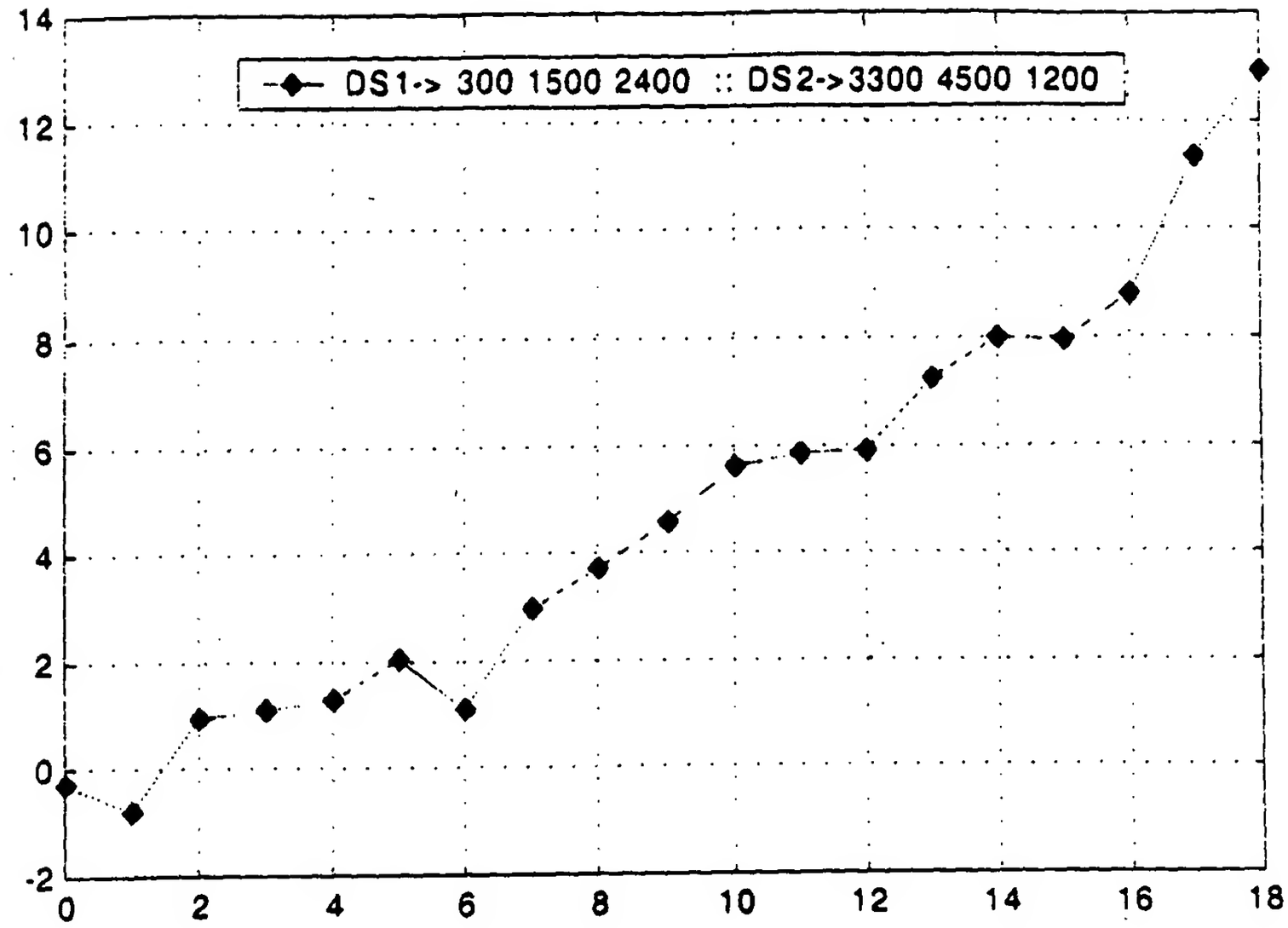
DS1-> 300 1500 2400 :: DS2->3300 4500 1200
14
12
10
8
6
4
2
0
-2
0
2
4
6
8
10
12
14
16
18
Ratio of Lower down-stream carrier frequency Power to higher down-stream carrier frequency Power (dB)
Loop length (kft.)

Fig. 4

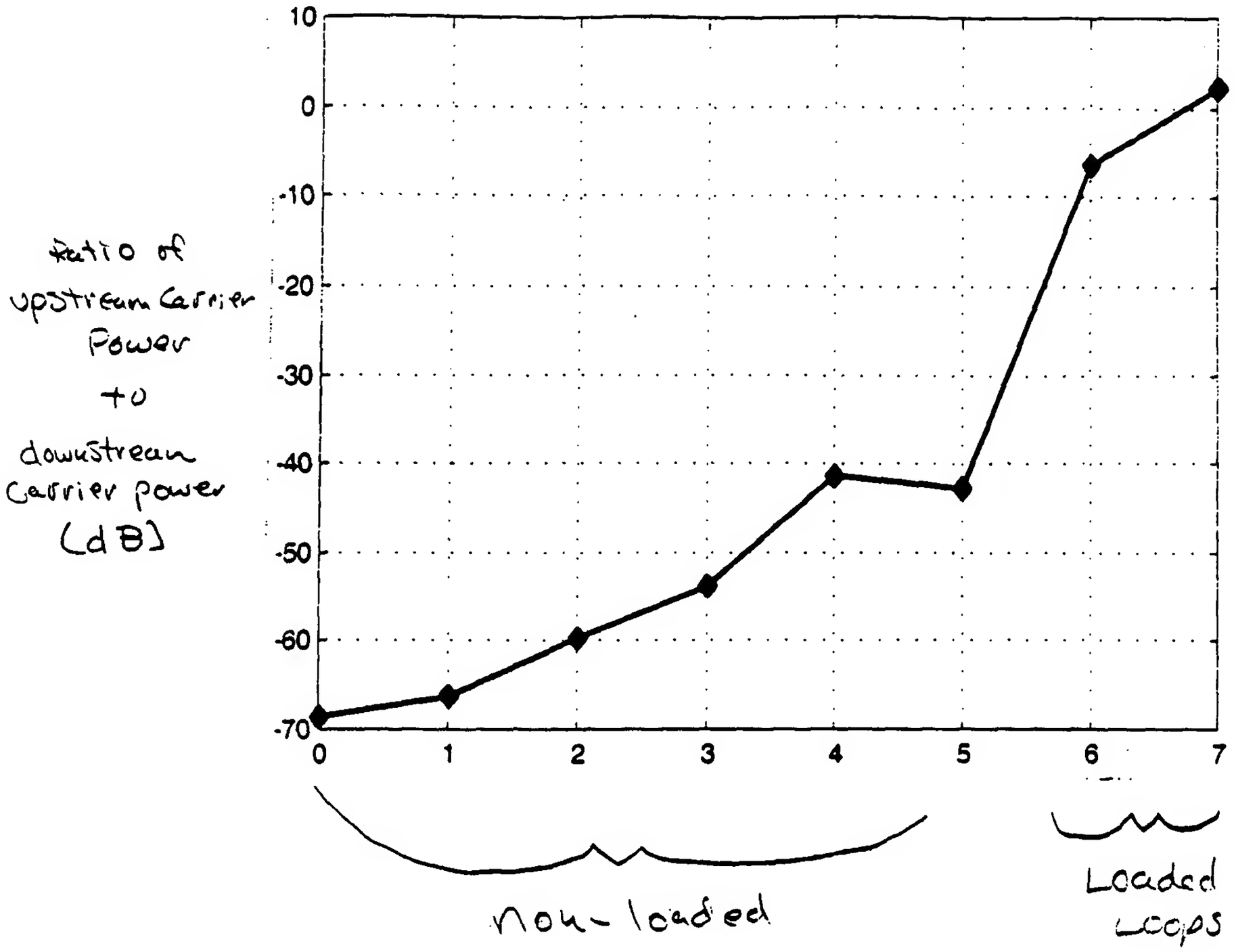
10
0
-10
-20
-30
-40
-50
-60
-70
0
1
2
3
4
5
6
7
Ratio of upstream Carrier Power to downstream Carrier power (dB)
non-loaded loops
Loaded Loops

Fig. 5

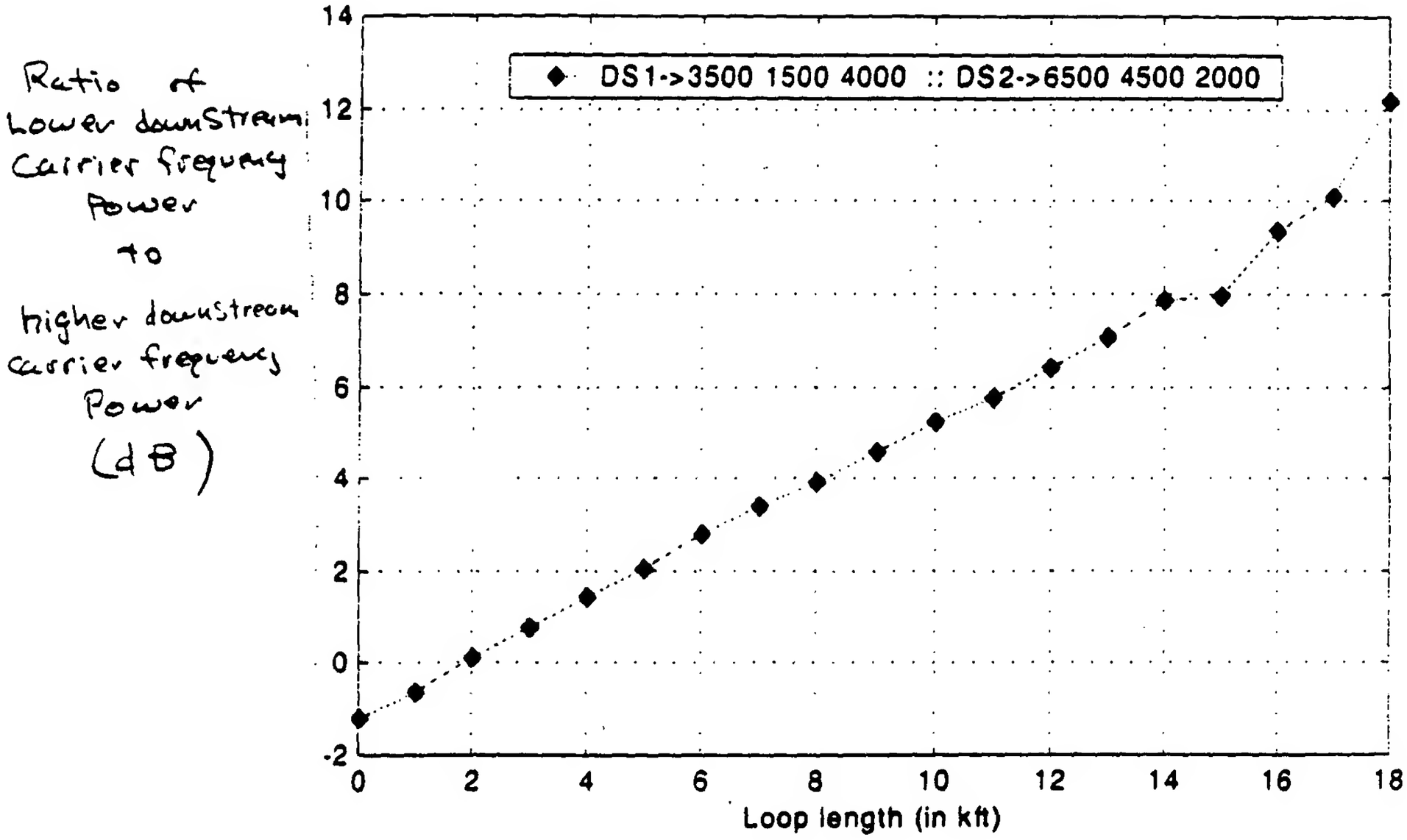
Ratio of Lower downstream Carrier frequency Power to higher downstream carrier frequency Power (dB)
DS1->3500 1500 4000 :: DS2->6500 4500 2000
14
12
10
8
6
4
2
0
-2
0
2
4
6
8
10
12
14
16
18
Loop length (in kft)

Fig. 6

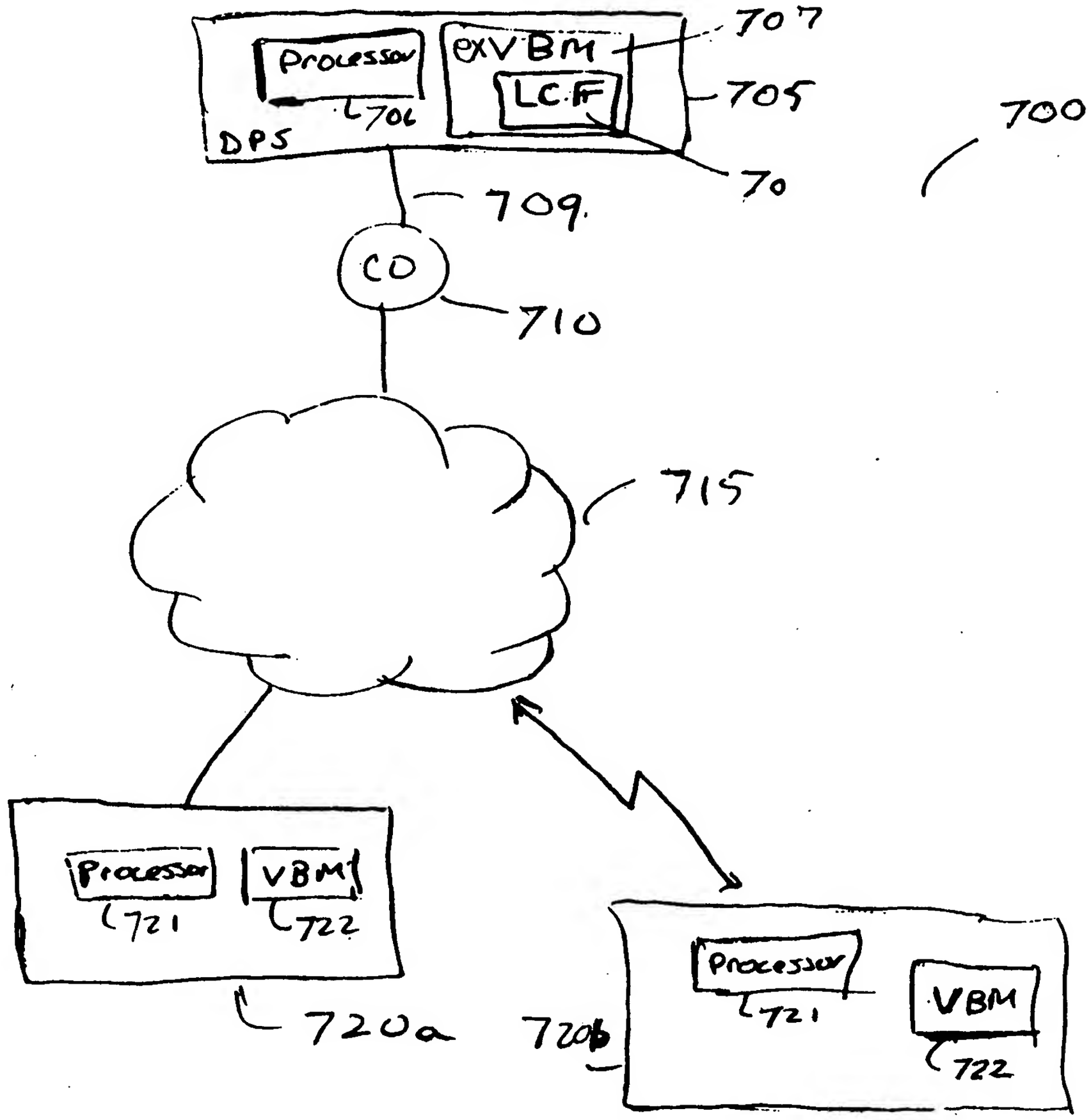
Processor
701
eXVBM
LCF
707
705
DPS
700
709
CO
710
715
Processor
721
VBM
722
720a
720b
Processor
721
VBM
722

Fig 7